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February 21, 2000
National Highway Safety Administration.
Docket Management
Room PL-401,
400 Seventh Street, SW
Washington. D. C. 20590

NHTSA-99-6550-8

Re: Docket No 99-6550;
RIN 2127-AH16
Federal Motor Vehicle Safety Standards:
Heavy Vehicle Antilock Brake System (ABS) Performance Requirement.
Federal Register dated December 21, 1999

Gentlemen:

Bendix Commercial Vehicle Systems (***BCVS***), formerly AlliedSignal Truck Brake Systems Company, a unit of Honeywell International Inc, is the developer and manufacturer of air brake systems and components. BCVS submits this response to the National Highway Traffic Safety Administration (***NHTSA***), relative to the above referenced Notice of Proposed Rulemaking (***NPRM***). This proposal recommends amending Federal Motor Vehicle Safety Standards No. 105; Hydraulic brake systems (***FMVSS#105***) and No. 121; Air Brake Systems (***FMVSS#121***), by extending the current braking in a curve requirements of FMVSS#121 for truck tractors to medium and heavy trucks and buses.

The following BCVS comments are directed to the proposed rulemaking for FMVSS#121, since air brake systems and their components are BCVS's core business.

BCVS generally supports the proposed amendment to FMVSS#121 extending the braking-in-a-curve requirement currently specified for truck tractors to both single unit trucks and buses. However this rulemaking has been based upon limited testing conducted by the Vehicle Research and Test Center. A major concern is the lack of data on the numerous configurations of completed single unit trucks that have a high center of gravity (***c.g.***) in the loaded condition.

BCVS recommends deleting the fully loaded braking-in-a-curve test for all vehicles because:

1. All braking-in-a-curve test results known to BCVS indicate that a lightly loaded test condition is the most severe condition for this test, which evaluates the anti-lock brake systems capability to maintain lateral stability. Also any attempt to design an anti-lock brake system solely to meet the unladen braking-in-a-curve test would compromise its performance in the high coefficient stopping distance test.

2. The industry's Society of Automotive Engineers recommended practice J1621 "Braking Stability and Control Performance Test Procedures for Air and Hydraulic Brake Equipped Trucks, Truck-Tractors and Buses" brake-in-a-curve performance is at the lightly loaded condition, with the loaded condition optional.

3. Concerns for safety in the conducting of this test as applied to a loaded high c.g. vehicle. Should vehicles with a high c.g. leave the low coefficient surface during testing in the loaded condition, there is a potential for vehicle rollover.

4. Because of complexities of determining an appropriate loading specification for the variety of vehicle configurations and body forms. These complexities include tanker trucks, tow trucks, cement mixers, garbage haulers, etc. and the corresponding cargo.

If NHTSA is of the belief that the fully loaded braking-in-a-curve testing is essential, then the establishment of a load c.g. is important to avoid the dangers of rollover during testing. BCVS has no data to assist the agency in this undertaking.

Since NHTSA is proposing an allowance of 1000lbs (plus 500lbs. for driver, observer and instrumentation) during the test, for the provision of a roll bar, BCVS recommends that other sections of FMVSS#121, that specify an unloaded condition, also be reviewed to include this allowance. See (S5.6.2 (b) and Table I, items 6 & 7).

Although the testing of towing trucks buses and articulated buses have not been addressed in this NPRM, BCVS believes that NHTSA intends that these vehicles should not be exempt from the braking-in-a-curve test as prescribed for straight trucks and buses. Furthermore because the requirements now proposed are to be the same for truck-tractors and single unit trucks, then the equipment specifications should also be the unified (S5.1.6 (a) and (b)).

BCVS also recommends that although not part of this rulemaking action, NHTSA should eliminate figure 1 (a) and its referenced section S6.1.13 (b) as they are no longer used in the standard.

Should NHTSA desire additional information or clarification please contact me at (440) 329-9430.

Sincerely,

David J. Knight
Director, Engineering (Systems & Valves)